

Work Order ID 82796

82796

Page 1

April-10-12 7:56:22 AM

Item ID: D350-636-012

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Skidtube RH

Stop ***NS2***

Start Date: 10/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: *ML5*

Date: *12/04/10* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

JB Skidube

For MLT 12-4-20

82796

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Page 2

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8-Open up holes for Detail "K" to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail L to 0.500" (8 holes per side)

9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10-Open up holes of Detail A to 0.297" (total of 2 holes per side)

3/12/09/11

W/O:		WORK ORDER CHANGES					
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NR1

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Date:

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Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004

A/R Aluminum Rod batch: M120854

8E 12/04/12

12-Grind welds flush as per Dwg D2750

900 12/04/12

120

QC10- Inspect visual per QSI004- ground welds

0.00

120

QC

Memo

0.00

Quality Control

Sizbel 12

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

Sizbel 12

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Customer:

Reference:

Run Start ***NR1***

Approvals: Process Plan: Date:

Tooling: Date:

Stop ***NR2***

QC: Date:

SPC (Y/N): Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

2/6 12-4-12

150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.00

Quality Control

DP 12-4-12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Page 5

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NR1

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Date:

Tooling:

Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

0.00

160

Skidtubes

0.00

Skidtubes

Skidtubes

~~Memo~~

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291

batch: M120813

exp. date: 12-13

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R Aluminum Rod

batch: M120854

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

CF 12.4.12

7/6/12.4.12
DC 12/04/12

7/6/12.4.16
DC 12/04/16
7/CC 12/04/16

W/O:		WORK ORDER CHANGES					
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Page 6

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Tooling: Date:

Run Start ***NR1***

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Stop ***NR2***Sequence ID/
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DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

dwg D2750

12-Deburr holes

cc / ~~DS~~ 17/04/16

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

8/12/16/17

W/O:		WORK ORDER CHANGES					
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Page 7

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Approvals: Process Plan:

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Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

Pressure Wash per QSI005 4.3

0.00

190

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

M-1/HG

12-4-17

BL

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

200

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

9:00
320 OF
9:30

IX

M-1
12/04/18

210

QC3- Inspect Part Finish

0.00

210

QC

Quality Control

Memo

Inspect for foreign object per QSI 024

0.00

IX

Unalif

W/O:		WORK ORDER CHANGES					
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Page 8

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QC: Date: SPC (Y/N): Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

0.00

230

HandFinishing

0.00

HandFinish

Memo

Hand Finishing

1-Install inserts as per dwg D2750

2-Inspect for Foreign Objects

3-Spray inside of tube with "LPS-3"
batch: N/A

4-Install blade fitting D3488-042, wearshoes and ground handling hardware as
per dwg D2750
SIKA FLEX-241
BATCH: 121221
EXP DATE: 13/01

5-assemble o'ring to plug as per dwg D3492 and apply o'ring lube
A/R 55-o'ring lube batch: 116348

6-Coat all exposed fasteners with "LPS Procyon"
batch: 114596

1
RH

⊗

⊗

12/04/12

W/O:		WORK ORDER CHANGES					
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Page 9

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Date:

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QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
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DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00

Quality Control

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.00

Quality Control

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Date:

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QC:

Date:

SPC (Y/N):

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Sequence ID/
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Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00

270

Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-012

280

0.00

280

QC21- Final Inspection - Work Order Release

QC

Memo

0.00

Quality Control

12/4/23

12-04-23

W/O:		WORK ORDER CHANGES					
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Picklist Print

April-10-12 7:56:25 AM

Page 1

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82796

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev: I02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07-13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4,13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq 110 DD verf: EC IPP Rev: P 10.10.01 as
 per IIN revH DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2600-3-BENT

Manufactured

No

110

Each

27.0000

1

1

D2600-3-BENT

Extrusion Bent

**

12/04/11

Location

Loc Qty

Loc Code

LG

27

66875

7

73253

1

75021

1

75022

1

75023

1

81330

4

82347

12

D2744

Manufactured

No

110

Each

42.0000

1

1

D2744

Cap

**

BE 12/04/12

Location

Loc Qty

Loc Code

LG002

42

62715

1

70881

3

78900

38

Dart Aerospace Ltd

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Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160

Each

3.0000

1

1

D2739

350 I Beam

**

Location

Loc Qty

Loc Code

LG

82123

3

72155

1

81508

1

82122

1

D2743

Manufactured No

160

Each

314.0000

8

8

D2743

Crossbolt Spacer

**

Location

Loc Qty

Loc Code

LG001

314

67766

4

68251

3

73403

64

74445

1

78603

2

79517

30

D3490-3

Manufactured No

160

Each

70.0000

4

4

D3490-3

Cross Bolt Spacer

**

Location

Loc Qty

Loc Code

LG

68

82016

68

LG001

2

78800

2

1 7/6 12-4-12

BE 12-04-15
B 81965 * 8

BE 12-04-15

4

Dart Aerospace Ltd

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Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160 Each

104.0000

4

4

D3490-1

Cross Bolt Spacer

**

BE 12/04/15

Location

Loc Qty

Loc Code

LG

95

81976

95

LG001

9

62450

2

74875

4

77042

3

4

D3631-1

Manufactured No

230 Each

227.0000

8

8

D3631-1

Washer

**

8 (DP) 12/04/19

Location

Loc Qty

Loc Code

FG

100

81874

100

ST072

127

68062

2

75548 ✓

125

D3791-1

Manufactured No

230 Each

25.0000

1

1

D3791-1

Wearplate

**

1 (DP) 12/04/19

Location

Loc Qty

Loc Code

FP002

25

62239

2

78897

7

82168 ✓

16

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Page 4

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3793-3

Manufactured No

230 Each

30.0000 1 1

D3793-3

Wearshoe

**

1 (DP) 12/04/19

Location

Loc Qty

Loc Code

FP001

23

80434 ✓

11

82166

12

FP002

7

78935

7

MS21043-6

Purchased No

230 Each

765.0000 4 4

MS21043-6

NUT

**

4 (DP) 12/04/19

Location

Loc Qty

Loc Code

FG

20

103693

20

ST301

745

112314

39

117887

6

118384 ✓

200

120308

500

D3794-1

Manufactured No

230 Each

39.0000 1 1

D3794-1

Gasket

**

1 (DP) 12/04/19

Location

Loc Qty

Loc Code

FP

23

82167

23

FP002

16

75042

4

80435 ✓

12

April-10-12 7:56:25 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Page 5

Work Order ID: 82796

82796

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

259.0000

8

8

NAS1611-010

O-RING

**

8

DP

12/04/19

Location

Loc Qty

Loc Code

FP

50

110915

0

120770

50

FP001

209

110915

14

117460

8

118077

1

118612

3

119438

47

120986

50

121166 ✓

36

121259

50

D2741

Manufactured

No

250

Each

63.0000

1

1 ✓

D2741

Blade, 350 Skidtube

**

JB

12/04/20

Location

Loc Qty

Loc Code

ST

-10

ST466

73

71856

1

76984

22

79516

40

76984

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

190.0000

4

4

***NAS1515H3I ***

WASHER

**

4

(2P)

12/04/19

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

150

118686

3

119438

1

120360 ✓

96

121243

50

NAS1611-013

Purchased

No

230

Each

218.0000

8

8

NAS1611-013

O-RING

**

8

(2P)

12/04/19

Location

Loc Qty

Loc Code

FP001

218

116582

5

117291

2

117887

53

119623

36

120910 ✓

4

121166 ✓

68

121259

50

5
3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

499.0000

4

4

AN3C6A

BOLT

**

41. (2P) 12/04/19

Location

Loc Qty

Loc Code

FP001

1

111982

1

ST351

498

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

21

120423

9

120693 ✓

400

NAS1149C0832R

Purchased

No

230

Each

293.0000

1

1

NAS1149C0832R

WASHER

**

1 (2P) 12/04/19

Location

Loc Qty

Loc Code

ST297

293

114915 ✓

293

D3536-25

Manufactured

No

230

Each

22.0000

1

1

D3536-25

Gasket

**

1 (2P) 12/04/19

Location

Loc Qty

Loc Code

FP

14

81342 ✓

14

FP002

8

78902

8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Page 8

Work Order ID: 82796

82796

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230 Each

23.0000 1 1

D3794-3

Gasket

**

1 (2P) 14/04/19

Location

Loc Qty

Loc Code

FP002

23

74530

2

80436 ✓

21

AN3C5A

Purchased No

230 Each

1,596.000 34 34

AN3C5A

Bolt

**

34 (2P) 12/04/19

Location

Loc Qty

Loc Code

FP001

7

115835

7

ST350

1589

116419

28

117343

13

117764

7

117872

2

119749

23

120423 ✓

516

1210168

500

121255

500

D3537-1

Manufactured No

230 Each

75.0000 3 3

D3537-1

Wearpad

**

3 (2P) 12/04/19

Location

Loc Qty

Loc Code

FG

10

79833

10

FP002

65

69817

5

80337

11

81361

49

April-10-12 7:56:25 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:25 AM

Page 9

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230 Each

22.0000

1

1

D3535-25

Wearshoe

**

1 (2P) 12/04/19

Location

Loc Qty

Loc Code

FP001

22

62233

1

80331 ✓

10

81357 ✓

11

D3492-3

Manufactured No

230 Each

69.0000

8

8

D3492-3

Plug

**

8 (2P) 12/04/19

Location

Loc Qty

Loc Code

FP-A

69

81967 ✓

69

83099 ✓

230

Each

0.0000

38

38

AN960C10L

✗

NAS1149C0332 ✓

Purchased

No

*AN960C10I *

washer

12/255 ✓

**

38 (2P) 12/04/19

D3488-042

Manufactured No

230 Each

15.0000

1

1

D3488-042

Blade Fitting Assembly, RH

**

1 (2P) 12/04/19

Location

Loc Qty

Loc Code

FP002

15

62003

1

75068

8

77015 ✓

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:26 AM

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

230

Each

2,461.000

38

38

AI S4-1032-225

Insert

**

38 (SP) 12/04/19.

Location

Loc Qty

Loc Code

ST281

2438

108696

146

110768

62

118386

55

118966

68

120671

107

121269 ✓

2000

ST282

23

120410

10

120451

13

D3492-1

Manufactured

No

230

Each

30.0000

8

8

D3492-1

Plug

**

8 (SP) 12/04/19.

Location

Loc Qty

Loc Code

FP002

30

69531

8

74444

2

76235

4

77037

16

D3793-1

Manufactured

No

230

Each

26.0000

1

1

D3793-1

Wearshoe

**

1 (SP) 12/04/19.

Location

Loc Qty

Loc Code

FP001

26

78901 ✓

10

82171

16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:26 AM

Page 11

Work Order ID: 82796

82796

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased

No

230

Each

104.0000

1

1

AN8C35A

BOLT

**

1 *DP* 12/04/19

Location

Loc Qty

Loc Code

FP002

103

115960

1

117834

7

118286 ✓

45

121275

50

ST346

1

114442

0

115188

0

115960

1

MS21083C8

Purchased

No

230

Each

105.0000

1

1

MS21083C8

NUT

**

1 *DP* 12/04/19

Location

Loc Qty

Loc Code

304

50

121185

50

FP002

1

115884

1

ST303

5

115884

0

118077

1

119309

2

119638

2

ST304

49

120142

7

120731 ✓

17

121011

25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:26 AM

Page 12

Work Order ID: 82796

82796

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230 Each

48.0000 8 8

D2745

Bushing

**

8

DP

12/04/19

Location

Loc Qty

Loc Code

FP

81964 ✓

46

79518

46

FP001

2

69529

1

76142

1

AN6C44A

Purchased No

230 Each

170.0000 4 4

AN6C.44A

BOLT

**

4

DP

12/04/19

Location

Loc Qty

Loc Code

FG

2

103964

2

ST343

168

120143 ✓

25

120465

23

121013

20

121167

100

D3532-1

Manufactured No

250 Each

51.0000 2 2 ✓

D3532-1

Spacer

**

JB

12/04/20

Location

Loc Qty

Loc Code

ST053

51

78839

27

82041

24

78839

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:26 AM

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

105.0000

2

2

✓

**

JB

MS21083C8

NUT

Location

Loc Qty

Loc Code

304

50

121185

50

FP002

1

115884

1

ST303

5

115884

0

118077

1

119309

2

119638

2

ST304

49

120142

7

120731

17

121011

25

121011

NAS1149D0863J

Purchased

No

250

Each

211.0000

2

2

✓

**

JB

12/04/20

NAS1149D0863.I

WASHER

Location

Loc Qty

Loc Code

ST298

211

118078

36

119307

75

120308

100

119307

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-10-12 7:56:26 AM

Work Order ID: 82796

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

82796

D350-636-012

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

46.0000

2

2

**

D3493-1

Washer

Location

Loc Qty

Loc Code

ST050

46

70697

2

77573

4

78835

40

79835

AN8C21A

Purchased

No

250

Each

121.0000

2

2

**

AN8C21A

BOLT

Location

Loc Qty

Loc Code

ST343

121

118758

5

120094

26

121067

20

121167

20

121275

50

120094

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL "F" SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER
NO. 82796 MCL
12/04/10

RELEASED

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEC 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PO	DART AEROSPACE USA, INC.	
DRAWN	RA	PORT HADLOCK, WA	
CHECKED	AS	DRAWING NO.	REV. F
MFG. APPR.	AS	D2750	SHEET 1 OF 11
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DE APPR.	AS	350 SKIDTUBE ASSEMBLY	NTS
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

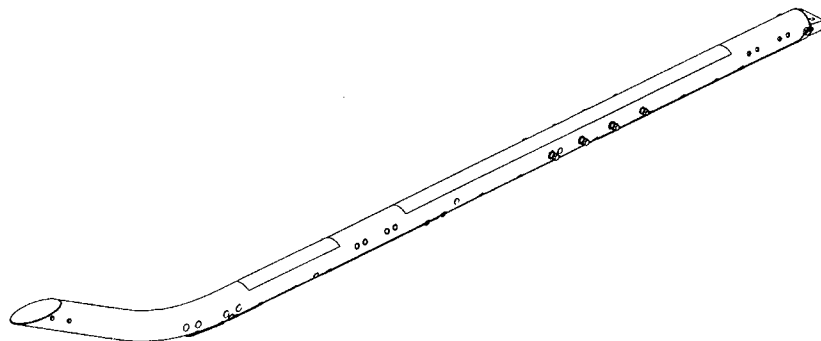
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

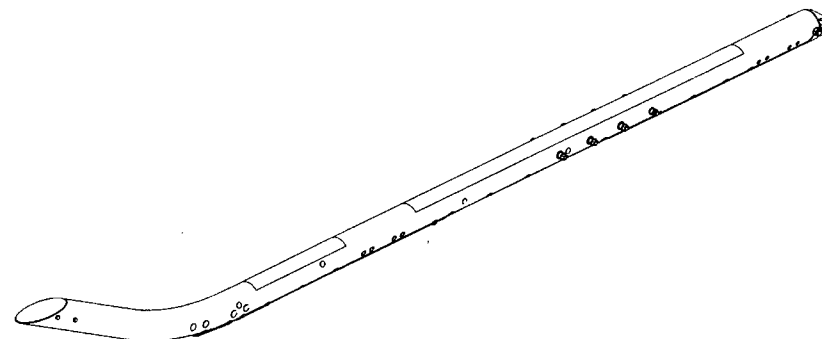
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

82796



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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08-09-22/14

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

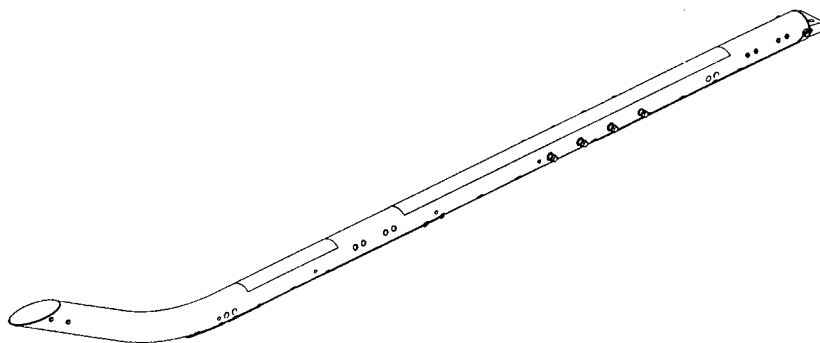
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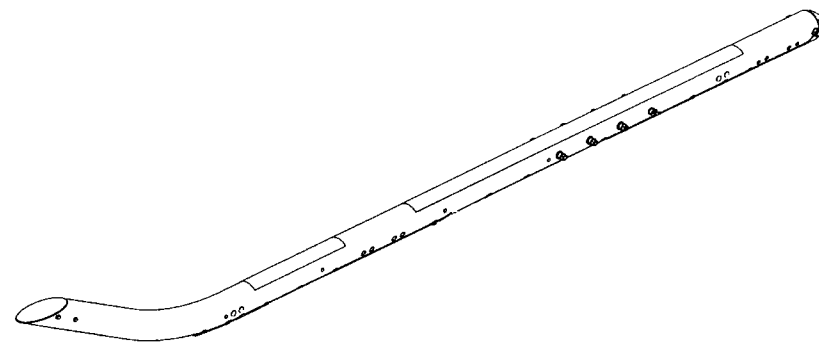
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

02796



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
68-9-22/11

DESIGN		DART AEROSPACE USA, INC.	
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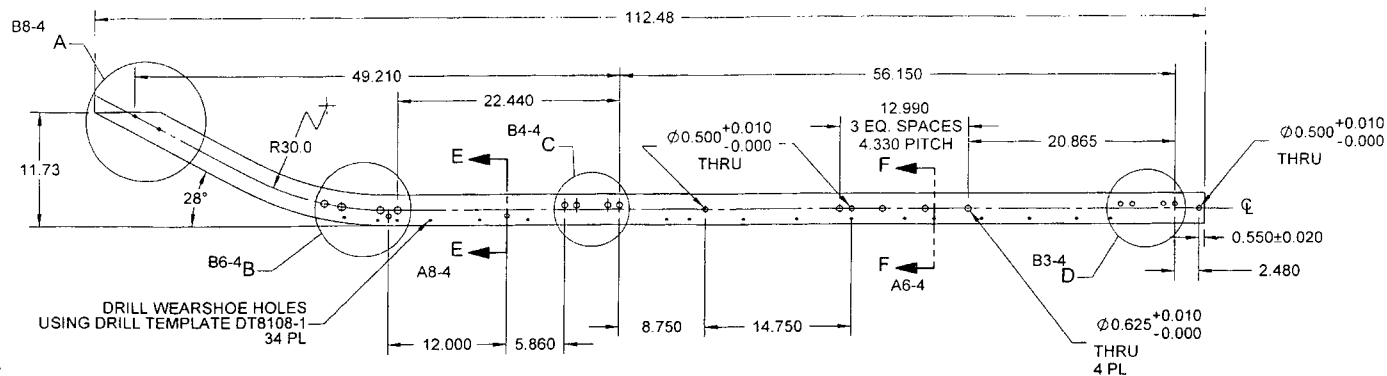
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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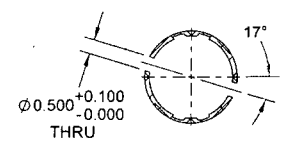
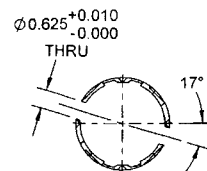
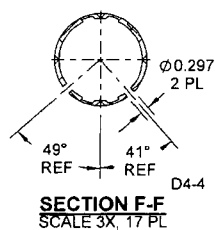
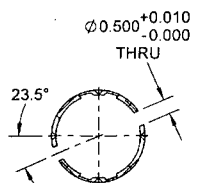
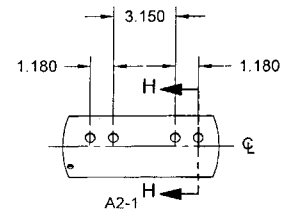
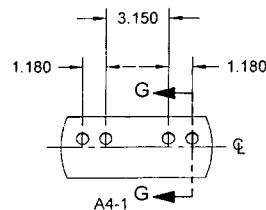
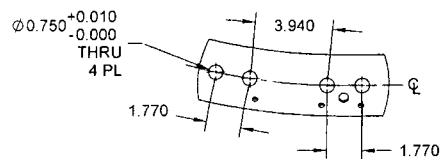
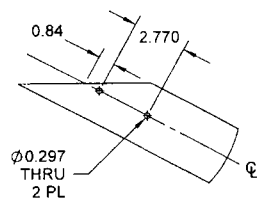
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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D2750-1 LH SKIDTUBE



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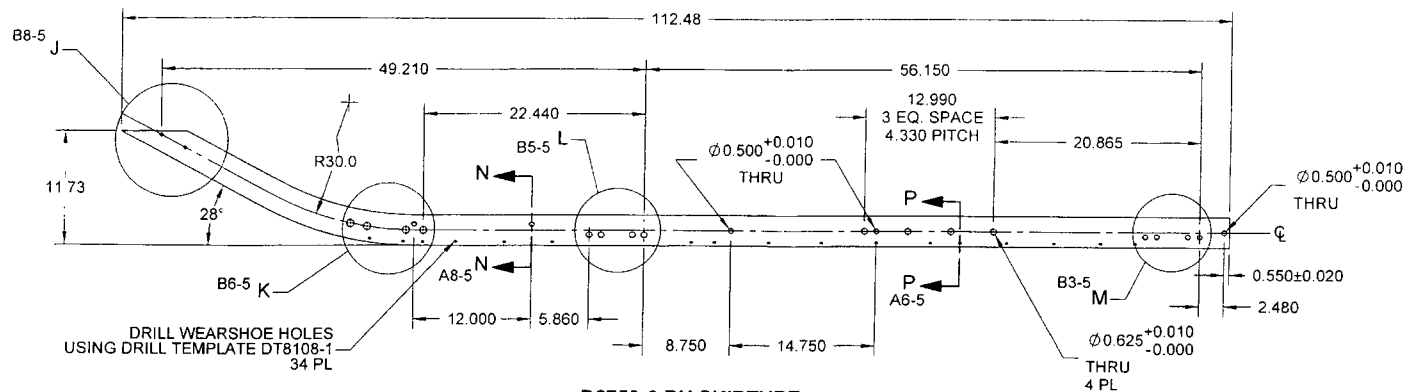
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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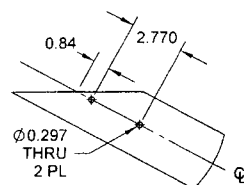
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

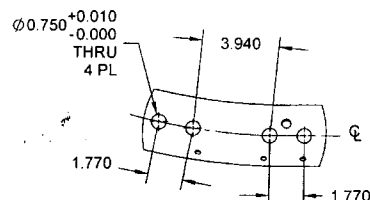
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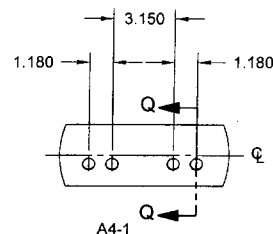
D2750-2 RH SKIDTUBE



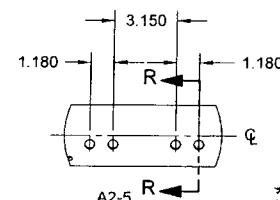
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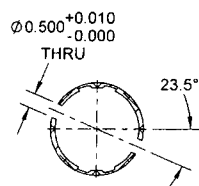
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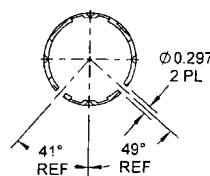
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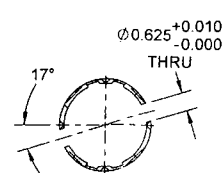
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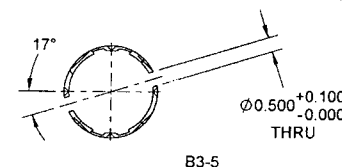
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

DESIGN		DART AEROSPACE USA, INC.	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

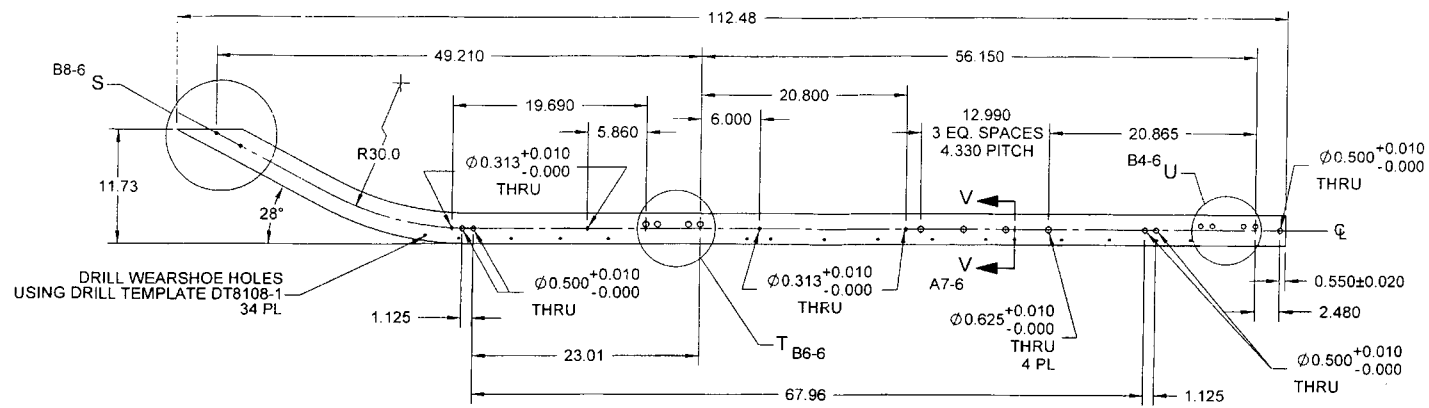
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

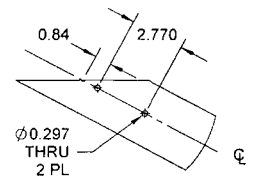
NOTE: Date & initial all entries

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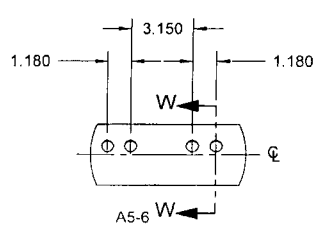
02796



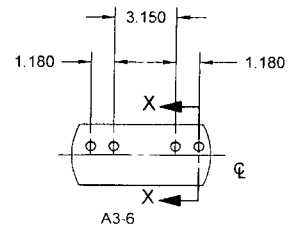
D2750-3 LH SKIDTUBE



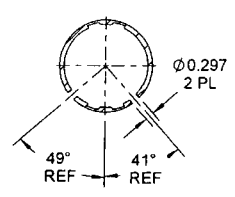
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SCALE 2X



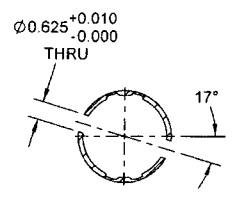
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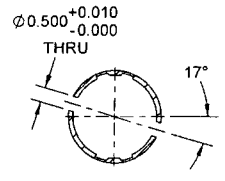
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

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DESIGN		DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.			SHEET 6 OF 11
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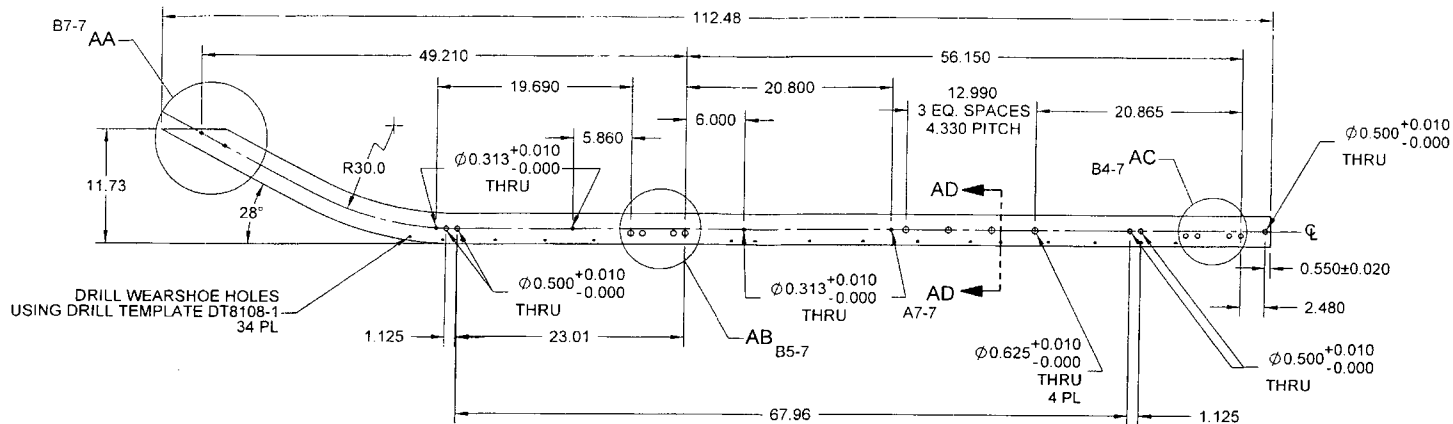
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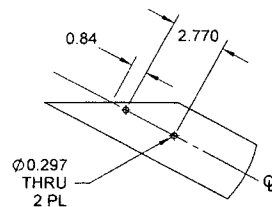
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

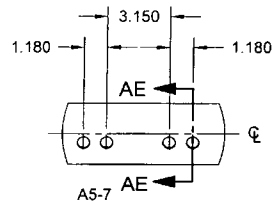
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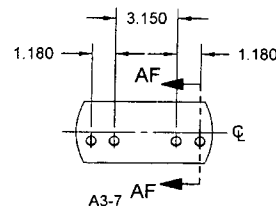
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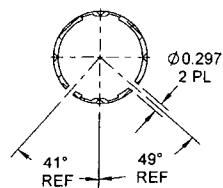
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SCALE 2X
D7-7



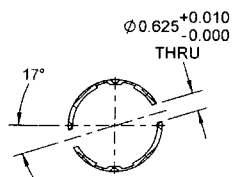
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C4-7
A5-7



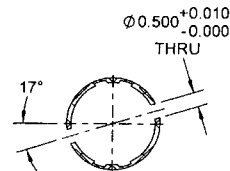
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D3-7
A3-7



SECTION AD-AD
SCALE 3X, 17 PL
D3-7



SECTION AE-AE
SCALE 3X, 4 PL
B6-7



SECTION AF-AF
SCALE 3X, 4 PL
B4-7

RELEASED
08-09-22-118

DESIGN	REV	DART AEROSPACE USA, INC.	
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MFG. APPR.	REV	D2750	SHEET 7 OF 11
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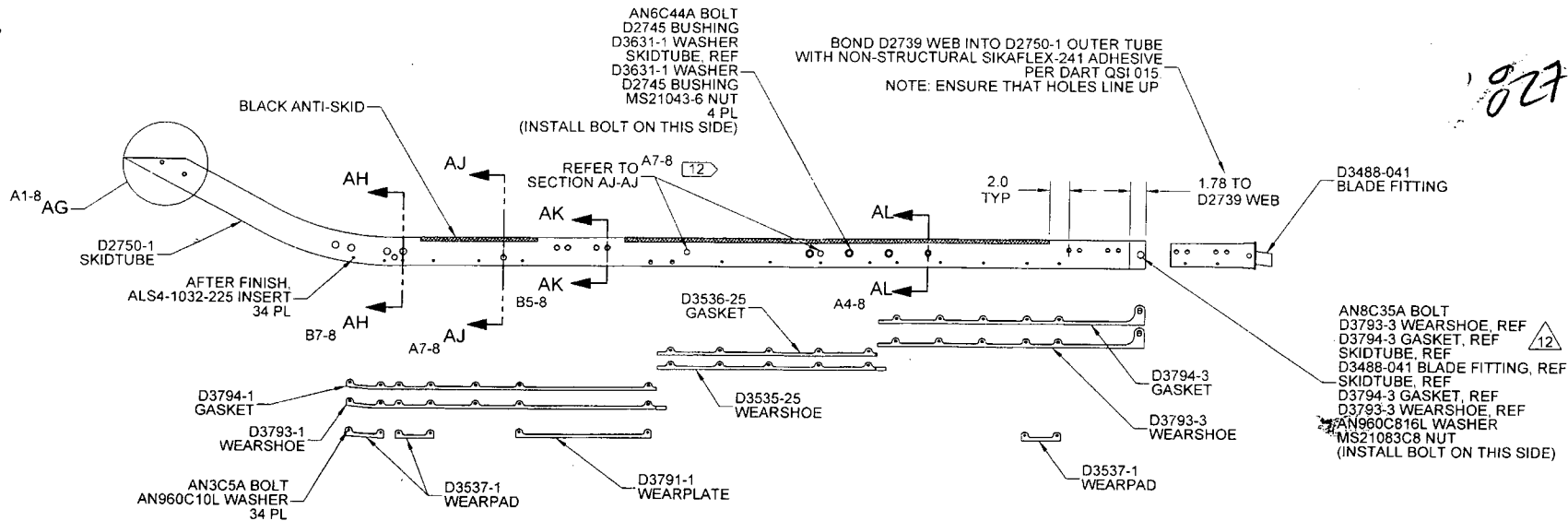
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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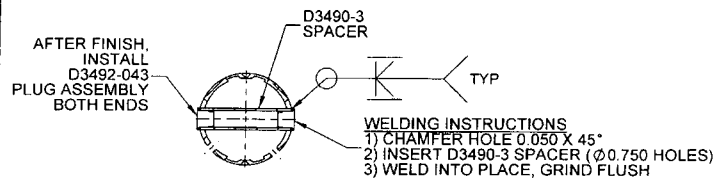
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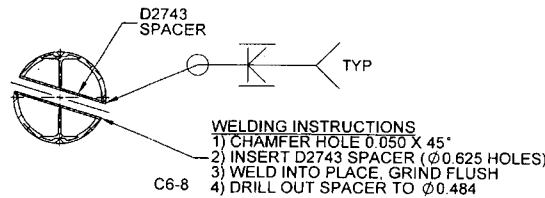
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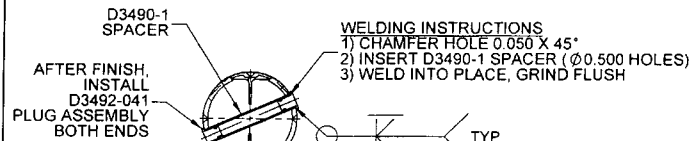
D2750-041 350 SKIDTUBE ASSEMBLY, LH



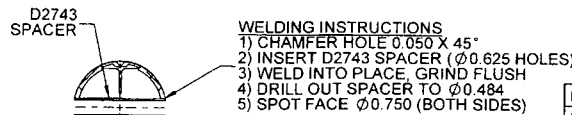
SECTION AH-AH
SCALE 3X, 4 PL



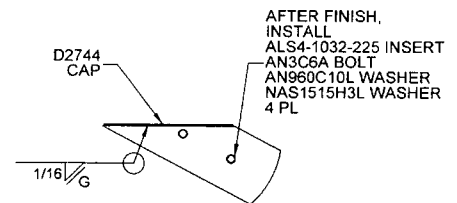
SECTION AK-AK
SCALE 3X, 4 PL



SECTION AJ-AJ
SCALE 3X, 4 PL



SECTION AL-AL
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AG
SCALE 2X

RELEASED
08.07.16

DESIGN		DART AEROSPACE USA, INC.	
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MFG. APPR.		D2750	SHEET 8 OF 11
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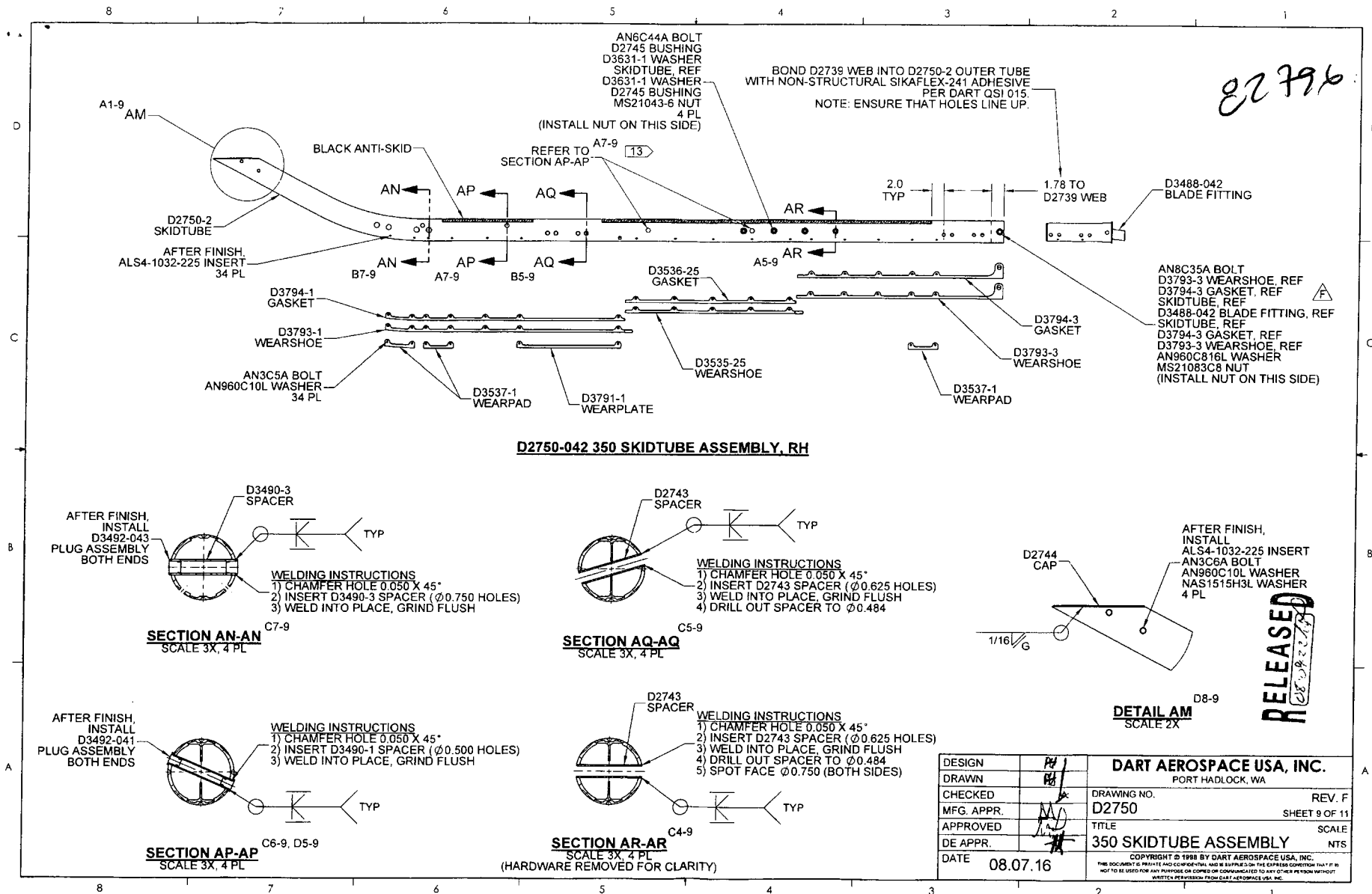
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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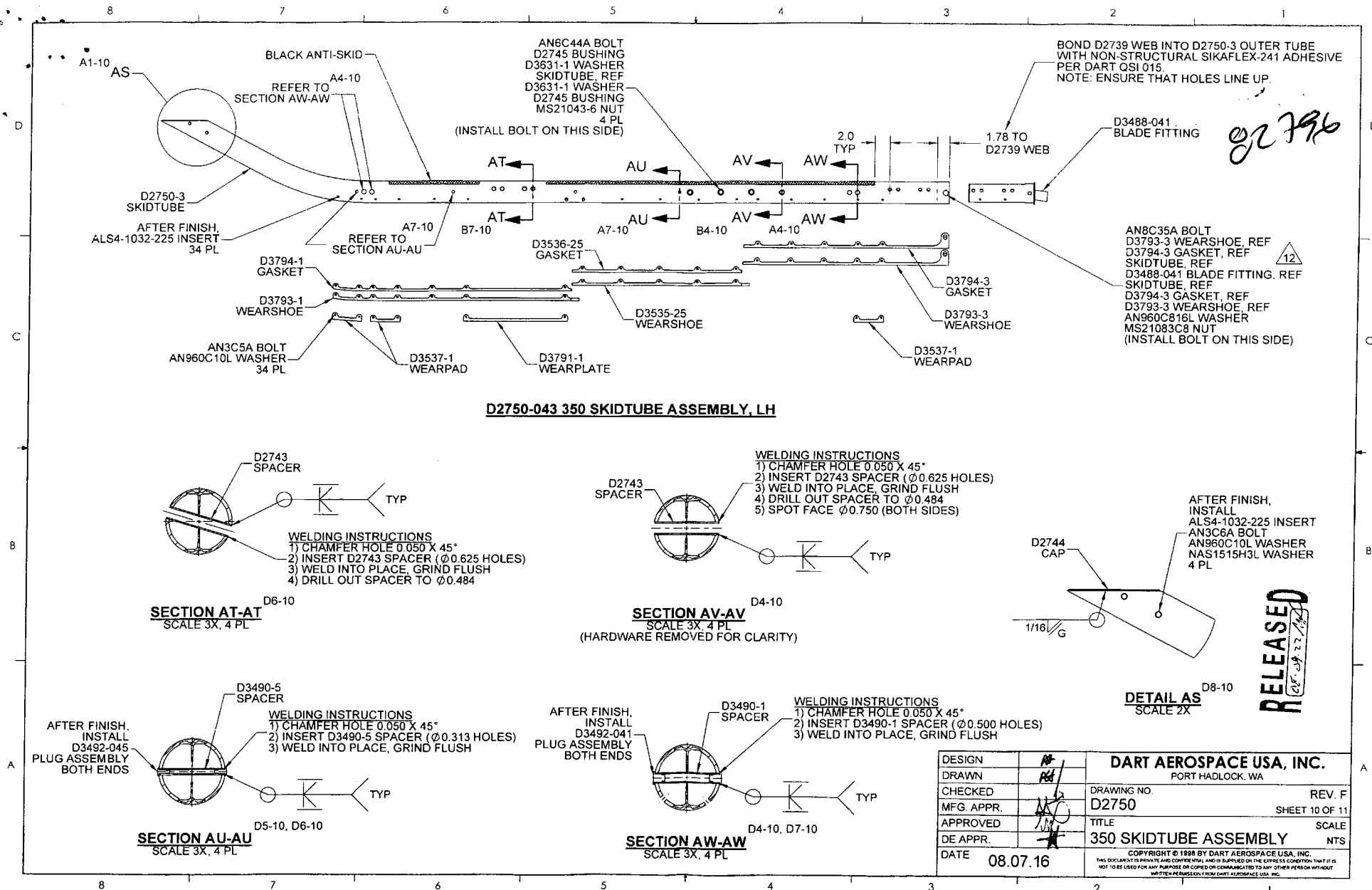
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

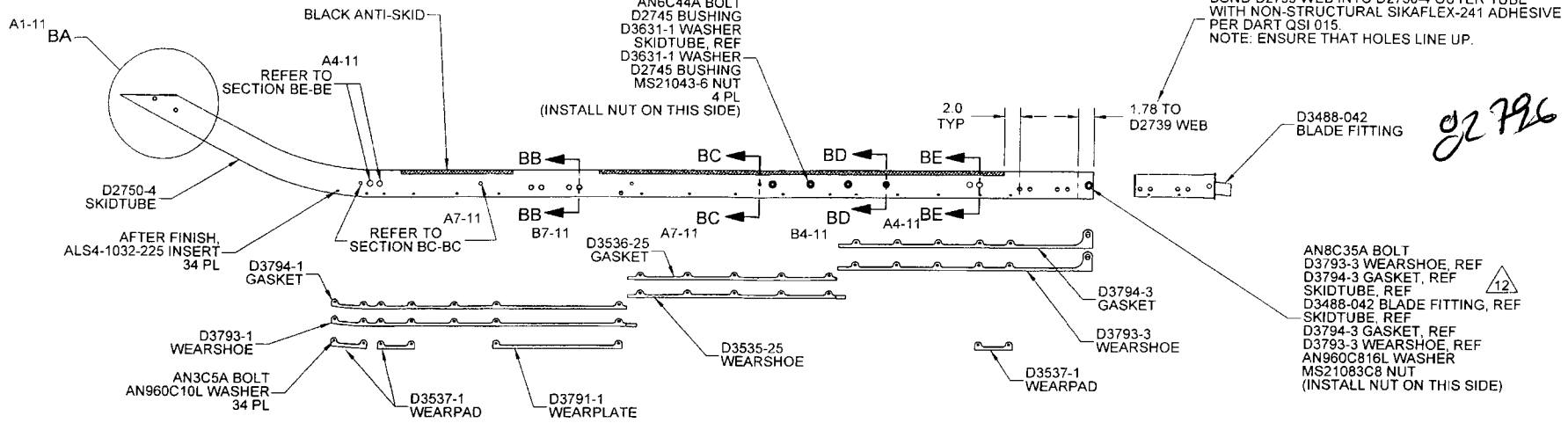
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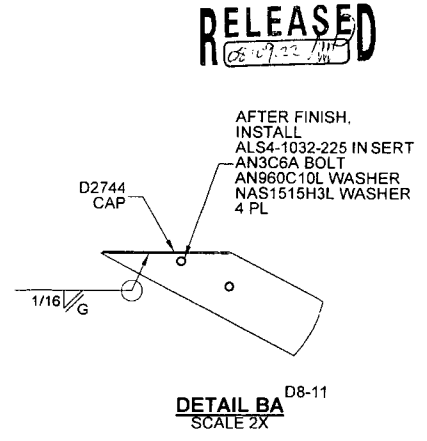
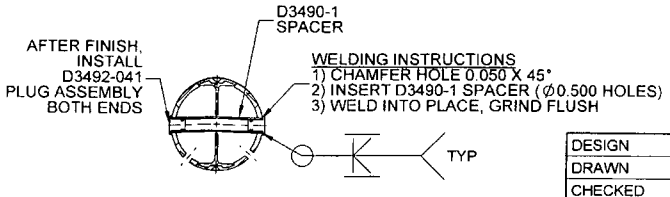
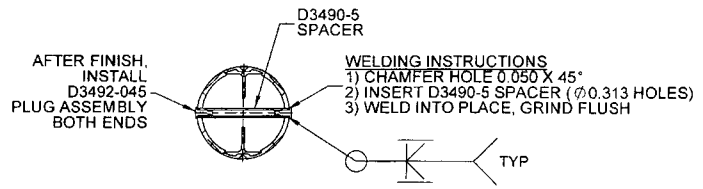
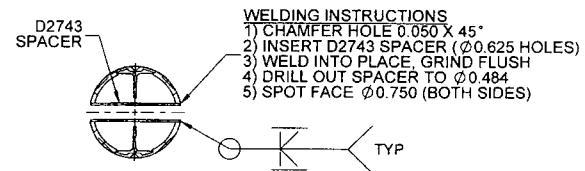
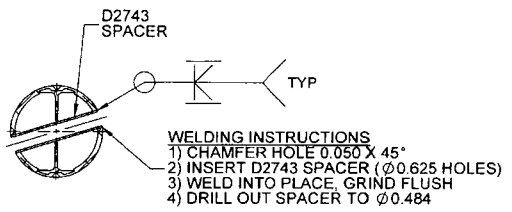
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1



D2750-044 350 SKIDTUBE ASSEMBLY, RH



DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 11 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.	
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 289

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 81400
Part number: A350-636-016
Description: Sandwich
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier David Sewel Date of Test Coupon 12.04.17
Welder Barclay Elliott Date of Test Coupon 12.04.17

The above named individual is qualified in accordance with AWS D17.1.2001 to weld